The Need of a "Rational Almanac."

By Moses B. Cotsworth, F.G.S., formerly of York, England, now of box 211 Victoria, B.C.

[Prefatory Note. — Mr. Cotsworth was introduced to the Sectio by Sir Sandford Fleming, K.C.M.G., who spoke of him as a gentleman who had given prolonged attention to the subject—one of universal importance—which he was about to discuss. Sir Sandford proceeded to make a few remarks on the general subject of "A Reformed Calendar." It has been thought desirable to prefix his observations to Mr. Cotsworth's paper.]

Sir Sandford Fleming's Address.

The calendar of days, weeks and months, which we have inherited from past ages, is found in many quarters to be inadequate for our modern requirements, especially in many branches of industrial life, in business operations and various spheres of human activity; it is especially felt by railway and other transportation companies. The defects of the calendar are borne with equanimity by the community generally, apparently under the belief that no change can be made; that the months, for example, varying in length from 28 to 31 days, are fixed by some natural law and as unalterable as the motion of the heavenly bodies. There are a few persons, however, who begin to see the matter in a different light. A spokesman in favour of some change and improvement has recently been heard in the Parliament of the United Kingdom. I hold in my hand a proposal for a simplified calendar by Mr. Alexander Philip, of Brechen in Scotland, and we have here with us to-day, a gentleman from the City of York, England, who has given the subject prolonged consideration. For myself I warmly approve of the movement to simplify the calendar, and my earnest desire is to see the Royal Society of Canada take a leading part in promoting a needed change—a change which would benefit the great human family for all future time.

That such a change can be effected I have no doubt whatever, provided we take the right course, and the right course to follow is to begin by seeking the proper means of gaining the assent of all interested in the proposal.

The question arises: who are interested? and the answer is, everybody,—all civilized nations are concerned in any proposition to modify the calendar of days and months which has come down to us through the centuries.

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Members of the Royal Society will remember a cognate case which presented itself on this continent thirty or forty years ago. The development of the Railway System of this country was the direct means of forcing the matter on our attention. The establishment of the Canadian Railways, extending from the Maritime Provinces westerly towards the Pacific, brought to light difficulties in reckoning time. It was discovered that generally speaking every town and city had its own standard by which the hours of the day were reckoned. It was found that there were nearly a dozen standards of time between Halifax and Sarnia, and there was every prospect, in the absence of a proper system, of having eventually nearly a hundred standards between the Atlantic and the Pacific. This was suggestive of confusion, and worse than confusion, in operating the railway system of the future.

Among the records of the Royal Society will be found a detailed account of the means taken to avert these evils. A scheme was evolved, and not only Canada and the American Continent, but all countries on the face of the globe were benefited.

In May, 1870, the matter was brought to the attention of the Marquis of Lorne, then Governor-General of Canada, by a memorial from the Canadian Institute, Toronto. His Excellency took means to bring the question to the notice of Her Majesty's official and scientific authorities in London, and through the Home Government the attention of foreign governments was directed to the subject.

This was the first practical step taken, and the world is more indebted than it knows to the representative of the Queen in this Dominion—to the same British nobleman who, a few years afterwards, became the founder of the Royal Society of Canada. This step led eventually to an International Conference held at Washington from which, as a direct outcome, the meridians of the globe were standardized, and the reckoning of the hours of the day simplified by having one definite standard for the world.

I venture to think that the question of simplifying the almanac can be dealt with similarly. I see every reason for memorializing the Governor-General on the subject, in the hope that His Excellency may take the first practical step in a movement of such general and wide importance. May we not be justified in the expectation that in due time an international conference may be assembled, possibly in Ottawa, to consider the matter, and that, as a result, all civilized nations would have a simplified and greatly improved calendar for their common use and benefit in reckoning the days, the weeks, and the months throughout each and every year.

SANDFORD FLEMING.

Mr. Cotsworth's Paper.

We naturally assume that the methods of our ancestors are best until necessity, the mother of invention, causes someone to initiate an improvement which we adopt when convinced it will benefit us.

Thibetans continue carrying merchandise on pack-horses between their cities, over mountains and valleys; whilst we speed across the Rocky mountains, through tunnels and over bridges, along tracks now being reduced in grade to economize time and expense.

Similarly, we may avoid the needless and tiresome almanac ups and downs of our 28, 29, 30 and 31 day months, and ensure the smoothest possible gliding of the almanac register of our 365 days' year, in weeks and months through all future years, if we simply legislate that either Christmas Day, or New Year's Day, shall not have a week-day name, and that our easiest present month of February shall permanently measure future months as per the following:—

Model Month.

Sundays	1	8	15	22
Mondays	2	9	16	23
Tuesdays.	3	10	17	24
Wednesdays	4	11	18	25
Thursdays.	5	12	19	26
Fridays.	6	13	20	27
Saturdays.	7	14	21	28

We most easily recognize the month's length in February, especially when it begins on Sunday, as it consists of four of the weekly units by which we work and pay. The fact that the 28 days are exhausted by the regular multiple of 7 days per week, which expires with the month, makes it very easy to remember both the day of the week and the date.

If all other months were of that length, the week-day names for those dates would be permanent and many important advantages would result, giving increased facilities to everybody. But when the 1st of February registers successive week-days in the following years, that simplicity and convenience disappears, as the month then contains three complete weeks, with parts of two other weeks as the first and last days of the month. That confusing result, unfortunately, affects other

months, which never can, under the existing almanac, both begin and end with the week. They always have at least one fraction of a week beyond four weeks, and in nine or ten months out of the twelve there are two portions of weeks to be computed, when adjusting weekly payments with monthly wages.

Those shifting factors so confuse our ideas of a month that few persons can mentally gauge the month, which, beyond the week, is the most used unit of time we are constantly needing. The reason is that the months are unequal and their dates persistently changing their week-day names; whereas, if the "model month" were adopted, the respective week-days would never deviate from the four fixed dates therein assigned to each name. Then we could instantly call to mind the identity of both week-day names and dates for any day in the year, and forgetful people could be sure of the current day of the week and date when it would be so easily shown by a pointer on our watches when Sundays are lettered at the quarter-hour points, and the six week-days in each quarter.

This subject in its practical bearing upon trade, and industrial life and general convenience has engaged my attention during twenty-four years. That accounts for my having been requested to bring the question before you.

Origin of the Suggested Reform.

The world-wide need for reform of the almanac has yearly engrossed me the more its everyday value to us all was ascertained by investigation, travel, discussion, and correspondence during the exceptional opportunities provided by professional work on both sides of the Atlantic, in expert business methods to avoid waste labour.

The waste directly caused by our unequal months was evidenced early during my twenty-five years of statistical work, abstracting the weekly, monthly and yearly earnings, etc., for the railway company carrying the largest tonnage in the world, who are also the largest dock owners in the world.

In non-leap-years all the twenty-eight days of February, being repeated during the first twenty-eight days of March, with the same week-day names to the respective dates, made all statistical comparisons easy and exact between these two periods, but then only. The regular weekly sailings of the continental and coasting steamers fitted both periods in the current and preceding non-leap-years.

Everything in earnings and expenditure was then on the same time basis, as, although the preceding year began a day earlier in the week, there were four constant periods of four weeks each. That enabled

us to ascertain the cost of working with less labour, and, further, we gained greater accuracy. We were thus able to get home earlier and happier, without working unpaid overtime.

Being desirous of doing so every month, my attention was directed to the loss and anomalies developed by our imperfect almanac system. Whilst investigating the origin of our anomalous months and the shifting weeks therein, as explained later, an easy way was disclosed by which all our almanac troubles can be avoided.

Noticing that as business became more exacting in accelerated ratio each following year, the chief officers required more precise explanations of the differences in the cost of handling the traffic each successive month, to avoid waste and increase efficiency; the extra trouble was so generally caused by the needless variations of our almanac (especially after the moon-wandering of Easter began), that the child-born assumption as to the almanac system of our ancestors being best, gradually vanished, as the extent of our almanac created inconveniences, difficulties and waste of labour forced on governments, railway and canal companies, shipowners, manufacturers, traders and workers became evident.

The crude and imperfect system of having twenty-eight to thirty-one day months fixed nearly two thousand years ago by the Cæsars, sufficed when the work of the world was done by unpaid slaves; but the freedom and enterprise won since then have developed new conditions needing better almanac facilities. The exclusive barriers of nations have been broken down and interchange of trade is universal, necessitating duplicate dates by buyers and sellers where different almanacs exist. Few persons realize that the one-third of Europe's population (in Russia, Turkey, Roumania, Greece, etc.) trade with us in duplicate dates, involving interest calculations and legal difficulties. The introduction of steamships, railways, telegraphs, cables, telephones and modern business and social methods have very extensively changed our almanac requirements for equal months, etc., since the 7-days week was established in Europe by Constantine nearly four centuries after the irrational months were fixed by Augustus Cæsar.

The business and social inconvenience evidenced during the Christmas weeks of 1894 and 1895 (when Christmas Day came in the middle of the week), disturbed regular ideas of the week. Market-days and weekly appointments had to be altered, causing trouble, confusion, expense and disappointments.

Noticing the heart-burning caused to shop-assistants and other toilers, whose cherished Christmas family re-unions were curtailed to get them back for Friday and Saturday's business (because they could not link up the nearest week-end with the holidays), brought the idea to

my mind that as Christmas Day was kept like Sunday, the boon of a *fixed almanac* and Christmas Holidays always extended over the week end without splitting the week, might be secured if we simply kept its name as "Christmas Day," and relieved it from being enumerated as a day of the week—a "*Dies-non*" inserted as a public holiday between Sunday and Monday, where it naturally occurs in the year 1916.

Further, I saw that by similarly giving "Leap-Day" its proper name and letting it "leap the week-day name" as a "*Dies-non*" and public holiday, (rightly due to salaried servants who work that day for nothing), we might by relieving those exceptional year days from being enumerated as dates of the month, permanently win the many increased facilities and benefits which the easiest possible working month of four weeks would always bring by ending on Saturday,—and establish the easiest possible permanent almanac. Thus the golden key to solve our almanac difficulties and perfect the calendar appeared to be found in the "*Dies-non,*" and simpler months. Those form the essential features of the various proposals which have since been made to improve our yearly register of time, as the source of the mischief in changing the week-day names through all the dates in each year and separating Christmas and New Year's Day from the week-end, was then located in the odd 365th day beyond the fifty-two weeks of the year.

Possibly the last day of the year as a "*Dies-non,*" or duplicate Saturday might be preferred by business people for stock-taking, or New Year's Day be preferable to some nations; but the prospective advantages of adopting Christmas Day as the "*Dies-non*" at this stage in the world's history seem very much more important (for reasons which cannot be discussed in this condensed paper), in view of the earlier adoption of the simplified calendar by that more than two-thirds of the world's population who now use lunar almanacs, as in India, China, Japan, etc. They could only adopt it when the moon was *new* at the winter solstice to which Christmas is the nearest, and would naturally revert in subsequent years by omitting three leap-days, after the advantages of the proposed almanac lead those nations (who are now rapidly being aroused to realize the practical benefits of such improvements), to negotiate by international conference for general adoption.

We should remember that Christmas was not fixed as the exact date of Christ's birth, but because the first new moon after the *Winter Solstice* shone on December 25th, when the first public celebration of that festival necessitated long pilgrimages and the moon was the monthly guide to the masses of the illiterate people. For the same all-powerful, practical reason, Julius Cæsar fixed January 1st to begin the new era, because the "*first new moon after the winter solstice*" then shone.

knowing that his subjects, then scattered through Europe, Africa and West Asia, had to make long journeys in slow stages, depending upon the moon entirely as their indicator for the date, after they had been warned to prepare for the new era's inauguration when they noticed the lowest sunrise and sunset at the winter solstice,—just as the Red Indians and the Hudson's Bay traders had to do when Europeans first came to America.

We know that the Indians did so during our lifetime, as their moon-sticks, now in my possession, prove, and their huge mounds in the Mississippi Valley indicate.

History of our Almanac.

When the Roman Cæsars fixed the irregular lengths of our months, Northern Europe was being colonized, like Canada now is. Between three thousand and four thousand years before, the wise Egyptians had by their stupendous efforts in building pyramids won the most valuable secret of the length of the solar year, at such a cost that they naturally kept it secret (as also did the Babylonians and Chinese, etc.), knowing that the lives of their people depended upon intense culture of the two narrow strips of land between the Nile and the sandy hills, which for more than a thousand miles up the meridian confine the fertilizing waters of that river to its narrow valley. Within that area three crops per year could be grown without any manure when they knew the right crops to sow and precise days of the year for each agricultural operation, in that constant sunny climate, by simply measuring the daily variations in the length of pyramid shadows as shown, after investigations throughout Egypt, on page 78 of my book.[1] The usefulness of that knowledge leaked out to Southern Europe through Greek traders, and it is significant that Julius Cæsar obtained the advice of the great astronomer from Egypt's University at Alexandria to arrange the most useful principle of *fixity* in the Roman months and years, which drifted with the moon as is still done under the moon-wandering calendars used by the Chinese, Japanese, Arabians, etc.

Europeans then generally registered months by the moon's phases, like the Red Indians of the North-West still do by their Spring Festival beginning their twelve-moons year with the *first new moon after the first thunder,* as I found the Sarcees doing. The next five moons counted on one hand register Sarcee summer moons, and after the Autumn Festival moon, the five winter moons are counted on the other hand. Before they were thus able to count twelve, they tallied ten moons as the Arabs did. Indeed, the Romans counted ten moons per year, which

[1] The "Rational Almanac," price 5s., ex M. B. Cotsworth, York, England, or $1.50, ex M. B. Cotsworth, Victoria, B.C.

drifted through all the true seasons until Numa, about 713 B.C., added January and February. That is evidenced in our almanacs by September (7), October (8), November (9), December (10) still ending the year, which then began with March.

The quarters of the moon originated our 7-days week, as the moon's cycle is 29.53 days, one-fourth of which is 7.38 days. The adoption of the nearest day was inevitable and was most wisely ordained in the Mosaic Law and adopted by the early Christians, whose consistent observance of the Sabbath gradually impressed the Romans with its practical advantages over their ten days counted thrice on the hands as thirty days per moon. That led the Emperor Constantine, after he adopted Christianity, to worthily derive his title of "the Great," by decreeing the observance of every seventh day as Sunday, under the name "*Dies-Solis*" in 321 A.D., when Europeans rejoiced on receiving that greatest blessing of the almanac's *fixed* seven-days week and day of rest.

It is the glory of the Christian Church that it thus secured that priceless boon to humanity. Will its sections now unite for their common good with their governments to relieve us from moon-wandering Easters, which never do good by drifting that tends to empty the churches of people?

Citizens feeling the inconvenience caused by the churches maintaining shifting Easters, blame the church authorities on seeing the children catch cold by wearing Easter costumes in early Easters. Then the change from the warming winter football, etc., games to the standing cricket tempts youths to cripple their health, whilst toiling farmers, labourers, and artisans are tempted to take the first opportunity of planting potatoes, etc., in early Easters and have their crops ruined by subsequent frosts.

The adherence to wandering Easters has been a constant drag upon church usefulness. Numerous churches continue to keep parish accounts from Easter to Easter, as in your modern Cathedral at Ottawa. That antiquated accounting resulted in fifty weekly collections for last year and fifty-five for this, and a prospect of fifty-one for next. Such old fogey methods tend to confusion and fail to profit anybody.

The churches have an excellent opportunity to remedy all those evils by simply agreeing to permanently establish Easter (like Christmas), when it falls most conveniently for their people on April 23rd in 1916, and support reform of the months which have neither Church origin nor Bible authority, as their history proves them to be of Pagan origin by direct decree of the Cæsars, who, at least, understood the benefit of *fixed arrangements* for good government.

The Roman Pontiffs, as High Priests in Pre-Christian times, secretly controlled the declarations as to whether twelve or thirteen

moons should be counted in the coming year. As there was no *fixed* date in the solar year known to the common people, the populace could not detect when the year was declared one moon wrong, because the system, if loyally followed, varied the moons nearly three-fourths of a month from the solar seasons, because 365.24 days divided by 29.53 per lunation, equals 12.37 moons per year; hence two years being 24.74 moons, indicated Agricultural seasons .74 of a moon, or 22 days *behind* at the end of the second year. To rectify that, 13 moons were required in the third year, which registered the seasons three days too early. Next, the fourth year's seasons were 19 days behind, and so on, like the confusing Easter wanderings we foolishly continue that way.

The Pontiffs abused their high powers when bribed by Roman rulers to extend their periods of lucrative office by declaring thirteen moons when there should have been twelve, to personally gain another month's taxes. That naturally developed the harmful system of public plunder (now called "graft") and led to political patronage thrusting unworthy men to the front, regardless of the serious fact that farmers were thereby misled into sowing seed, etc., too late or too early; with the inevitable result that bad crops caused famine and impoverished the people the farther their sowing moon (then known by its number in the year), was drifted from the season. Thus, their "New Year's Day" varied in solar date, and as the Pontiff was in collusion with the Consul when he directed the heralds to announce the New Year by the Roman Consul publicly hammering the *annual nail* into the Temple of Minerva, the Goddess of Wisdom and Science, the people accepted the year's length then regulated in that crude way.

The great object of our calendars and almanacs is to register the beginning of each new year on the same fixed date of the solar year and correctly tabulate the 365 days in *fixed* order throughout the seasons, which are daily indicated by the sun's noon elevation. The moon cannot be wisely used to register either the true seasons nor measure months of any *fixed length in days,* which Julius Cæsar found were absolutely necessary for good government to help the people and prevent the abuses which had drifted the almanac eighty days from the true seasons by the year 46 B.C. He realized that the grave public loss and confusion caused by that moon-wandering from the seasons could best be avoided by having *fixed lengths* for each month, *entirely independent of the moon,* and always beginning the year upon *one precise day* of a *fixed* season.

Julius Cæsar, therefore, established the basis of our almanacs by his great reform which *fixed* alternate months of thirty-one and thirty days, and began the 1st of January in the year 45 B.C. with the "*first New Moon that shone after the Winter Solstice.*" The urgent public need did not permit of delaying that great change until the new moon

appeared on December 22nd [as it does at 23.50 o'clock this year (1908) on the Standard Meridian of Greenwich], so that first noon, 45 B.C., accidentally fixed the commencement of our years ten days from nature's year's end.

That discrepancy he could not avoid when the illiterate peasantry scattered throughout the Empire could only understand that signal to begin the new era, but as the great object of that reform was to confer the permanent benefits of a *fixed year* to locate the season for each day's work, the days were arranged accordingly in thirty-one and thirty day months.

July, then named in honour of Julius Cæsar's birthday therein, had thirty-one days, but when Augustus Cæsar was enthroned, after Julius Cæsar died, vanity led him to alter the name of his birthday month from Sextilis (6th) to August, and as it had only thirty days his pride led him to add one day to August. For reasons best known to himself he took that day from February.

That gave the third quarter of the year ninety-three days, leaving only ninety in the first quarter, and by disturbing calculations for rents, interest, etc., caused public outcry.

To sustain his pride from publicly acknowledging Julius Cæsar's superior plan, Augustus took one day each from September and November, to make the 31st of October and 31st December. Thus the pride and arrogance of Augustus Cæsar has during 1,900 years inflicted the present irrational months upon European races with the consequent inequalities of 90, 91, 92, 92 days in the quarters of the year, and the disparity of three days between the 181 days in the first half, and the 184 days in the second half of the years.

Those inequalities not only disturb the computations for interest, rents, etc., but they unequalize the annual sub-divisions of salaries, etc., and have a far more potent effect upon the most desired net earnings of large railway and other corporations whose influences are yearly becoming more powerful, *e.g.*, the three days difference between the half years inflate the dividends for the half year ending December 31st, by about 2 per cent, and that disparity is further disturbed by the present needless changing of the week-day names for the days throughout successive years, owing to the odd 53rd week-day beyond 52 weeks recurring on the last day of each year. Those with the inequalities of the months cause stocks and shares to vary in value beyond trade variations, giving rise to stock exchange gambling, and with their attendant evils inflict loss upon thrifty workers variously paid by the week and month, paying rents and other charges by the existing unequal months, which cannot be equated by the indispensable week that divides February alone into the four weeks best suited to modern requirements.

The difference between the 28 days of February and 31 days in January and March, approximates 11 per cent, and renders accurate comparisons impracticable, whilst fair adjustments can only be approximated after elaborate calculations are made. Similar difficulties arise from the disparities between the other months of the year. They cannot be truly compared either with each other, nor with the corresponding months in the preceding years, because their week-day earning times are different. Those differences are developing serious drawbacks in all kinds of statistical work and investigation dependent thereon, such as the growing need for the exact ascertainment of the costs of production per ton or per article, the costs of transportation required by railway, canal and shipping companies, coal, iron, and other mining companies, and manufacturers generally. Banks, insurance companies, medical, city, and government authorities, need more precise comparisons for records of immigration, births, deaths, etc., best obtained each four weeks.

To meet the growing need for accurately apportioning costs of production and comparison, the practice of sub-dividing salaries, wages, etc., into the varying monthly payments proportionate to the number of working days in each month, has rapidly spread through the United States, "because it pays," and for that reason vitally affecting competition, tends to spread through Canada and the world's manufacturing countries, entailing many millions of waste calculations and much inconvenience, all of which will have to be endured under more intensely developing conditions, unless our months are adjusted in the near future to meet the controlling needs of commerce for monthly accounts commensurate with the working week. Neither months of 30 nor 31 days can overcome the inherent difficulty of fitting the inevitable week of seven days into any other month than that of the simple 28 days *to adequately meet public convenience*, which must dominate all other considerations.

Existing Anomalies and Inconveniences

The defects of unequal months changing week-day names for dates trouble everybody. Think of the number of times we want to know what day of the week and month it is, or will be on future dates, the intervals between which are so complicated to calculate by our irregular months. When the Cæsars fixed those months that difficulty was scarcely felt, references were few, and they had neither the week nor Sundays changing day names in the months; but now the weekly Sunday's rest from business has developed special duties and recurring engagements for particular week days, and weekly payments needing better almanac facilities for reference than sufficed when nearly all days were equally available for every purpose, as with the Red Indians.

Our confusing system of changing day names for the same *fixed dates* each year, makes it needlessly difficult to decide in advance upon any particular dates in the month for special purposes. We cannot select the occasion and fix a yearly date without involving annual alteration of its week-day name and the erratic occurrence of Sunday on that date postponing the event until a day later. Therefore, fixed market fairs, etc., are delayed and located as the first Monday, second Wednesday, etc., of a month. The months sometimes contain five Sundays, at others four. Those vary from month to month, and year to year, so that the number of working days per month is never constant in any month. The varying four to five Saturdays in a month also affects all estimates of commerce and industry, as workmen usually work only half that day, whereas more steamships sail on that day than any other.

Those divergencies disturb the comparative value of all statistical work now of growing importance industrially, and to the governments whose imports, exports, immigration, etc., returns are distorted by our changing almanac system. All these cause needless work and detract from useful results, as one month's record cannot now be fairly compared with another, nor with the corresponding records in previous years. The confusing months inconvenience everybody.

The most important anomalies and inconveniences thus created by our antiquated almanac system may be summarized as below:—

The months are unequal, involving fractions of weeks, changing week-day names for dates, Christmas and other festivals, fairs, etc.; disturbing market days, periods for legislative, law, university and school terms; stock exchange settlements, payment days for bills of exchange, trade accounts (now being tried at 28 and 30 days); moving dates of recurring business and social engagements, etc.; causing financial trouble to retail trades people, and householders, when five week-end payments for groceries, rent, etc., are required out of a monthly income, or monthly rents out of weekly wages. These operate to the disadvantage of poor people, as the fluctuations of the pawnbroker's business testify.

These inequalities, together with the unequal quarters of the year, disturb the computations for interest, salaries, rents, and all periodical payments. Other inconveniences beyond those named result, but those suffice to show the growing need for improvements in our calendars and almanacs for universal use.

The changing week-day names through dates of the year, and fractions of the week beyond the 28 days each month cause the trouble and confuse ideas of time.

Two main remedies are needed:—(1) Treat "Christmas Day," or "New Year's Day," or the 31st December as a holiday, without either

week-day name or monthly date, and likewise raise leap-day to be a *holiday*, without either week-day name or monthly date; (2) arrange the most convenient regularly recurring month of four weeks, with thirteen weeks in each quarter of the year.

Having arrived at the conclusion that reform was highly desirable, the next consideration was to ascertain what was practicable.

Reform Desirable and Practicable.

That led to the submission of those suggested remedies to the late Dr. Gott, the Bishop of Truro (England), to whom I also explained in 1898 the advantages of fixing Easter, having known him well in Leeds. He considered "they would benefit the entire human race," and cordially encouraged me to work for the reform, as also did the Dean of York, Cardinal Stonor (whom I was privileged to meet in Rome), Dr. Tempest Anderson, of York, and many others. My proposals of 1899 were then published.

Knowing that progressive reform would be more quickly taken up by the free, untrammelled minds of Americans. I visited the United States in 1903, and was highly pleased when President Hadley, of Yale University, told me that he thought the month of four weeks "*would come as a commercial necessity.*" Prof. Geo. F. Wright, D.D., and others said the reform would surely be accomplished in reasonable time if tactfully worked for—whilst prominent bankers and business men agreed that it was highly desirable and practicable. Indeed the United States Trust Co. and other bankers had, by printed interest cards, etc., already begun to charge interest every four weeks, and the U. S. A. comparative table of working days in each month (as reproduced on page 35 of the "Rational Almanac") was in regular use in the leading offices.

The governments, railway companies and other large employers had, through changing days and unequal months, long been burdened with vast numbers of monthly calculations to apportion yearly salaries, rents, etc., to the varying number of work-days in each month, to ascertain truer costs as against monthly revenue, traffic, sales, etc. They had elaborate tables printed and some offered to pay for shorter methods of calculation to meet their increasing needs, as my publications to economize such work were widely known.

That experience in America was emphasized when the four-week (28 days) system was found to have spread to the British and German iron and steel trades, steamship companies, etc., whilst all nations were feeling the increasing need for equal monthly periods of service and pay, as instanced by the Belgian Government having to adopt the four

weekly period for the employers' and employees' contributions to provide the best designed pension system for old age.

Then, feeling that the time had arrived to publicly advocate the reform, my book on "The Rational Almanac," was published in 1905.

Since that time increasing interest has been aroused by the advocacy for reform in both Europe and America. The celebrated French astronomer, Camille Flammarion, with others in Germany, etc., have joined with Lord Avebury, Sir Norman Lockyer, Sir Oliver Lodge, Mr. Alex. Philip, and other British advocates, in urging for improvement.

Sir Sandford Fleming, who is so widely known for his valuable experience in the establishment of International "Standard Time" has personally told you "*that the desired change can be effected I have no doubt whatever.*" Such testimonies commend the subject to your consideration. Now he has pointed out the right course to take.

As investigators have almost unanimously been led to realize the world-wide advantages which would result in everyday convenience to us all if the odd 365th day of the year (beyond the 52 weeks of 7 days) could be calendared without a week-day name to obviate the changing week-day names of dates through successive years, by simply naming "Christmas" or "New Year's" day apart from week-day names; which of the two is best may be left as a matter of detail for an international conference to decide. Similarly the minor question of the proposed fixity of Easter may suitably be left open for the churches to consider as the masses of the people evidence desire for a permanent almanac, bearing in mind the main point that the church and Sabbath were made for men, and not men for those worthy institutions.

To fit working weeks into months and quarters is the most important consideration to aim at in almanac reform. Whether that can be best done by three months of 30 days, plus one public holiday as a *dies non* each quarter, or two months of 30 days plus one of 31 days, as Mr. Philip and others have suggested (possibly without the world-wide consideration needed), or whether the thirteen months of four weeks each, as I originally proposed in the years 1896 to 1899, or some other scheme should be adopted, are subject to discussion, and whatever is best should prevail for public convenience.

It is important that we should consider the best methods that have been suggested by persons who have given most thought and investigation to the subject of simplifying our months. As these can be readily grouped under four typical methods, A, B, C, and D, and will be easiest understood in comparative form, the Comparative Table for A, B, C, and D is printed opposite.

COMPARISON OF METHODS A B C AND D

Respectively Proposed to Simplify the Months.

A B and **C** divide 12 months of 30 and 31 days into **Fixed Quarter Years,** each consisting of 13 weeks, with week-day names for the same dates of the month **recurring every 3rd month;** whilst **D** is designed to secure 13 equal months of 4 weeks each with fixed Quarter Years, and week-days **recurring on the same dates every month.**

METHOD	Week Days	JANUARY	FEBRUARY	MARCH
A	Su.	1 8 15 22 29	6 13 20 27	4 11 18 25
	M.	2 9 16 23 **30**	7 14 21 28	5 12 19 26
	Tu.	3 10 17 24	1 8 15 22 29	6 13 20 27
3 months of 30 days	W.	4 11 18 25	2 9 16 23 **30**	7 14 21 28
with ✦ the last day	Th.	5 12 19 26	3 10 17 24	1 8 15 22 29
in each Quarter as a	F.	6 13 20 27	4 11 18 25	2 9 16 23 **30**
Saturday Holiday.	Sa.	7 14 21 28	5 12 19 26	3 10 17 24 ✦
B	Su.	1 8 15 22 29	6 13 20 27	4 11 18 25
	M.	2 9 16 23 **30**	7 14 21 28	5 12 19 26
	Tu.	3 10 17 24	1 8 15 22 29	6 13 20 27
	W.	4 11 18 25	2 9 16 23 **30**	7 14 21 28
2 Months of 30 days.	Th.	5 12 19 26	3 10 17 24	1 8 15 22 29
1 Month " 31 "	F.	6 13 20 27	4 11 18 25	2 9 16 23 30
	Sa.	7 14 21 28	5 12 19 26	3 10 17 24 **31**
C	Su.	1 8 15 22 29	5 12 19 26	3 10 17 24
	M.	2 9 16 23 30	6 13 20 27	4 11 18 25
	Tu.	3 10 17 24 **31**	7 14 21 28	5 12 19 26
	W.	4 11 18 25	1 8 15 22 29	6 13 20 27
1 Month of 31 days.	Th.	5 12 19 26	2 9 16 23 **30**	7 14 21 28
2 Months " 30 "	F.	6 13 20 27	3 10 17 24	1 8 15 22 29
	Sa.	7 14 21 28	4 11 18 25	2 9 16 23 **30**
D	Su.	1 8 15 22	1 8 15 22	1 8 15 22
	M.	2 9 16 23	2 9 16 23	2 9 16 23
	Tu.	3 10 17 24	3 10 17 24	3 10 17 24
	W.	4 11 18 25	4 11 18 25	4 11 18 25
13 Equal Months,	Th.	5 12 19 26	5 12 19 26	5 12 19 26
consisting of	F.	6 13 20 27	6 13 20 27	6 13 20 27
4 Common Weeks.	Sa.	7 14 21 **28**	7 14 21 **28**	7 14 21 **28**

Methods Suggested to provide Simpler Months.

Various suggestions have been made to bring simpler and more equal months into use, and as nearly all plan the repetition of the week-days and datal order of January, February and March in each succeeding three months of the year, we may most easily consider the respective advantages and disadvantages of the four most typical methods, A, B, C, and D, if we concentrate attention upon those three months, bearing in mind that now January has 31 days, February 28, and March 31, and that the proposed months by methods A, B, and C would be exactly repeated in triplets after January February March

as April	May	June
July	August	September
October	November	December

Method D provides for the insertion of a new month of four weeks between June and July.

All the four methods provide for the "odd day of the year" as a "*Dies-non*" and public holiday, also for "leap-day" as a summer holiday.

The "*Dies-non*" is suggested as "Christmas Day" in both methods A and D; whilst B proposes it as "New Year's Day," and C reserves it as the "last day of the year."

They all rightly begin the year with Sunday and are planned to provide a fixed calendar for permanently locating equal quarterly and half-yearly terms and give *fixity of dates* for law, university, and school terms, statutory meetings for public authorities, markets, fairs, local festivals, and other anniversaries, such as the Royal birthdays and our own occurring on their respective permanent week-days for their particular dates each year — whilst D further provides for the desired convenience of *fixed Easters* and their contingent festivals, and *four fixed dates in every month for each week-day.* They offer those many practical advantages over the shifting system we have been content to use, because we did not know any better, until recently some people dared to think improvements could be made.

The table for comparison of methods A, B, C, and D, records in the heading their proposed sub-divisions of the year, and below each bold indicator letter in the front column details the method by which the days in each three months opposite are proposed to be apportioned. We will now proceed to consider the merits of each.

The fixity of the week-day names and dates to be repeated each three months being arranged for by all the methods, leads to the first and highly important consideration of the convenient working of the weeks within the three repeating lengths of months, which

by A end on Monday, Wednesday and Friday, respectively.
by B end on Monday, Wednesday and Saturday, respectively.
by C end on Tuesday, Thursday and Saturday, respectively.
by D end on Saturdays always.

A and C have the slight advantage over B of being more easily remembered as alternate days, but A's advantage is merely nominal, as the suggested Saturday holiday is practically a week-day, and other nations would not add those extra public quarter-day holidays to the more numerous holidays they have in Italy, Spain, etc., as they would make those poor people poorer.

D has the supreme advantage over the others of *always ending the month with the week on Saturdays*, to give the fullest public convenience by which we must always gauge the respective merits of each method.

The second test of usefulness is equality in the total number of days in each month. B and C have equal merit, as the 31st of March in B, is equated by the 31st of January in C. Here again A has the nominal advantage of equal months of 30 days, plus the Saturday holiday, after March 30th, but D has the most valuable advantage over all, of *absolute equality in every month.*

The third, but very important practical consideration in business matters, is the equality in the total number of *working days* the proposed months respectively contain. They are as follows:—

	January.	February.	March
Method A	25 days	26 days	26 days
" B	25 "	26 "	**27** "
" C	*26* "	*26* "	*26* "
" D	*24* "	*24* "	*24* "

C and D have equality in each of their three months, as shown in *italics.*

In this test B makes the most serious mistake of giving March two more days than January, and as that would give March an inflation of 8 per cent in earning time, and likewise inflate June, September and December with double the disparity they now bear to their adjoining months, whilst the object of reform is to remedy their present differences — *that seems a fatal objection* to B.

Both A and B propose for January, April, July, and October, one day or 4 per cent less earning time than the other months—a serious disadvantage.

That disadvantage was overcome by my preliminary method C, which gave 26 working days to each month; but it had to give place to the superior advantages in D of 24 working days of exactly the same total working value in every month of four working weeks and four pay-days, when practical experience so manifestly indicated the far superior advantages to be derived from months of four weeks each.

By proposals A, B and C there would always be five Saturdays in every third month, and, with the slight variation by method C, the five other six week-days would be repeated a fifth time in pairs at the end of each successive month, changing not only the week-day names for those dates *beyond the 28th in every case*, but unfortunately altering the names of week-days for every date through all the second and third months of each quarter of the year. That would leave no two consecutive months alike, and perpetuate unceasing changes in names of dates each successive month, similar to those which now confuse our minds.

We have already proved that nearly all our almanac inconveniences are caused by the needless changing of week-day names for monthly dates, and as that is the supreme test which neither methods A, B, nor C can pass,— the crowning advantage rests with method D, which perfectly meets the complete case of *providing for the return of the week-days in their ordinary course to the same fixed dates in every month.*

A glance down the table showing the Comparison of Methods enables us to see how by all the first three methods A, B, and C, the weeks are split between January and February, and between February and March, causing the former part of a broken week to be counted in January, and the latter part of February's last week to be computed in March, whilst the other portions of both those broken weeks would have to be accounted for in poor February, which has been so easy to us all, and sets such an excellent and practical example in modesty below its rivals in the February column, and, moreover, is decidedly proved to be the best month we now have in yearly use, or thus far experienced.

Its 28 days are practically as near the original moon-month's length of 29.53 days as are the 31 day months which A, B, and C unitedly ask us to dethrone from regulating the length of the majority of our months, when the logical sequence of Christians substituting the 7 days week for the Pagan 7.38 days quarter moon in the time of Constantine the Great (page 5) should be to proportionately reduce the months to equal periods of four weeks.

Having agreed that reform is both desirable and practicable, let us strive to make sure that when we do change it shall be to the *best* method.

Comparison of the Proposed Changes in Lengths of Months.

As the extent of the changes in the length of months proposed by A, B, and C are so nearly the same, we will consider their central one B as representative in this question of the actual changes proposed from the lengths of our present months, to compare with those suggested by D.

B would add two days to February, and one day each to June and September, whilst reducing January, May, July, August and October by one day each.

D, on the other hand, simply reduces all the months to the 28 days' length of February, and inserts a 28 day month after June—all exactly equal. That regular levelling down to the four common weeks would be easily understood by everybody, whereas the confusing additions and deductions to the various months proposed by A, B, and C would prejudice the advantage of change and leave their new months little better in usefulness than the present months for the masses of the people we need to consider most.

Such improvements as A, B, and C suggest would only give the advantages of fixed comparative week-day names to dates repeating *each three months,* but clearly the most insistent and constant public need is for the regular return of week-day names to the same dates in *every month* and months to end with the week.

We need not be surprised that the relatively very few lawyers and landlords who use the quarters of the year most and are least in touch with the almanac needs of the masses of the people, should, by repetition in legal documents, have attached undue importance to those three-monthly periods; but if they do not realize the vast changes effected during the last two thousand years, that have resulted in replacing the Roman system of quarter year payments by the vastly more numerous monthly and innumerable weekly payments and engagements now necessary, we who consider the merits of proposed improvements must give the most weight of opinion to that dominant fact of changed conditions having led to the quarterly periods being so little used now even in Europe, whilst you scarcely use them in America.

The few times the quarter years are used when compared with the constant recall of the month so frequently every day when reading and writing dates in our busy world, makes the practical value and convenience of having the quarter years end with the month, of very minor importance to that of ending the months with the week. But when the extension of method D is considered as the proposed "Rational Almanac" on the following page, the needs of fewer persons who use the quarter years are better met by the quarters there ending on Saturdays with the respective first, second and third weeks of the fourth, seventh and tenth months, than by each third month end of unequal months.

Indeed, it would be more convenient in many businesses to locate the quarter-day at those week ends when the pressure of monthly work was passed, as we now do in England by the 6th of April, and in Scotland by the 15th of May and 11th of November, for rentals and like payments.

Table D.

Proposed "RATIONAL ALMANAC," by M. B. COTSWORTH.

WEEK DAYS.	JAN. 1	FEB. 2	MAR. 3	APR. 4	MAY 5	JUN. 6	NEW MONTH 7	JUL. 8	AUG. 9	SEP. 10	OCT. 11	NOV. 12	DEC. 13	WORK DAYS
					EASTER MAY DAY		*Leap Day* WHIT SUN.							
Sundays	**1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	SUN. **1**	
Mondays	2	2	2	2	2	2	2	2	2	2	2	2	2	Mondays
Tuesdays	3	3	3	3	3	3	3	3	3	3	3	3	3	Tuesdays
Wednesdays	4	4	4	4	4	4	4	4	4	4	4	4	4	Wednesdays
Thursdays	5	5	5	5	5	5	5	5	5	5	5	5	5	Thursdays
Fridays	6	6	6	6	6	6	6	6	6	6	6	6	6	Fridays
Saturdays	7	7	7	7	7	7	7	7	7	7	7	7	7	Saturdays
				1st Quarter										
Sundays	**8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	SUN. **8**	
Mondays	9	9	9	9	9	9	9	9	9	9	9	9	9	Mondays
Tuesdays	10	10	10	10	10	10	10	10	10	10	10	10	10	Tuesdays
Wednesdays	11	11	11	11	11	11	11	11	11	11	11	11	11	Wednesdays
Thursdays	12	12	12	12	12	12	12	12	12	12	12	12	12	Thursdays
Fridays	13	13	13	13	13	13	13	13	13	13	13	13	13	Fridays
Saturdays	14	14	14	14	14	14	Dom. 14	14	14	14	14	14	14	Saturdays
							HALF YEAR							
Sundays	**15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	SUN. **15**	
Mondays	16	16	16	16	16	16	(July 4) 16	16	16	16	16	16	16	Mondays
Tuesdays	17	17	17	17	17	17	17	17	17	17	17	17	17	Tuesdays
Wednesdays	18	18	18	18	18	18	18	18	18	18	18	18	18	Wednesdays
Thursdays	19	19	19	19	19	19	19	19	19	19	19	19	19	Thursdays
Fridays	20	20	20	20	20	20	20	20	20	20	20	Thanks. 20	20	Fridays
Saturdays	21	21	21	21	21	21	21	21	21	21	21	Day. 21	21	Saturdays
										3rd Quarter				
Sundays	**22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22**	SUN. **22** *Xmas Day*	
Mondays	23	23	23	23	23	23	23	23	23	23	23	23	23	Mondays
Tuesdays	24	24	24	24	24	24	24	24	24	24	24	24	24	Tuesdays
Wednesdays	25	25	25	25	25	25	25	25	25	25	25	25	25	Wednesdays
Thursdays	26	26	26	26	26	26	26	26	26	26	26	26	26	Thursdays
Fridays	27	27	27	27	27	27	27	27	27	27	27	27	27	Fridays
Saturdays	28	28	28	28	28	28	28	28	28	28	28	28	28	Saturdays

There would be a distinct trade advantage in allowing time for the monthly cash to circulate for the relief of the strain of quarterly payments.

That is emphasized by the increasing tendency now shown all the world over, to pay dividends on consols, bonds, stocks and shares in railways and other industrial companies on various dates of the month for financial convenience, though their accounts are nearly all made up half-yearly. But whether accounted quarterly or half-yearly, those ending with the week on Saturdays would be far more convenient to all concerned than with the months now irregularly beginning and ending with parts of weeks.

Advocates of methods A, B, and C unitedly urge the advantages to be derived by locating fixed week-days to dates in each three months, but surely now that by our countless numbers of invoice and account entries, and constant reference to dates on letters, newspapers, etc., we use the month many thousand of times more often than quarter years, *it is more than a thousand fold more practically important that we should, if possible, end the month with the week, and always have the same week-day name attached to the same date in every month as proposed in D.*

That immense advantage of D is of such supreme practical importance, that in view of the fact that D also provides all the other advantages of A, B, and C (excepting the two quarters and one-half year ending with the week instead of the month,—which D so conveniently provides for), it directs our attention to D's complete plan as the "Rational Almanac," which on the opposite page displays the thirteen months of four weeks each, with the "New Month" inserted between June and July.

"THE RATIONAL ALMANAC."

This includes not only the arrangement of simpler months, but also the fixing of the "*Dies-non*" and festival dates.

The simplicity of the uniformly arranged four weeks per month can be seen at a glance. The 24 work-days per month, as detailed in the last column, are kept uniform in dates by the insertion of "Christmas Day" between the Sunday and Monday of the last week of the year, on the exact corresponding day to the present 25th of December, both being seven days from the year's end. But if the International Conference prefers the "*Dies-non*" to be located on "New Year's Eve" as the 365th day of the year, that will just as well maintain the 24 work-days per month, though it would longer defer and make it more difficult for China, Japan, etc., to adopt the simple almanac for universal use.

Throughout all the 365 days thus registered on the "Rational Almanac," every present almanac date as it occurs in 1916 would be

permanently fixed to the proposed dates at exactly the same number of days they are now located in point of time from the 1st January, as

Table E.

COMBINED CALENDAR FOR TRANSPOSING THE DATES BETWEEN THE PRESENT AND PROPOSED ALMANACS AFTER THE YEAR 1916.

Jan.	Day.	Jan.	Feb.	Day.	Feb.	Mar.	Day.	Mar.	Apr.	Day.	Apr.	May.	Day.	May.	June.	Day.	June.	July.	Day.	Sol.	Aug.	Day.	July.	Sept.	Day.	Aug.	Oct.	Day.	Sept.	Nov.	Day.	Oct.	Dec.	Day.	Nov.
1	S	1	1	W	4	1	W	4	1	S	7	1	M	9	1	T	12	1	S	14	1	T	17	1	F	21	1	S	22	1	W	25	1	F	27
2	M	2	2	T	5	2	T	5	2		8	2		10	2	F	13	2	S	15	2	W	18	2	S	21	2	M	23	2	T	26	2	S	28
3	T	3	3	F	6	3	F	6	3	M	9	3	W	11	3	S	14	3	M	16	3	T	19	3	S	22	3	T	24	3	F	27			Dec
4	W	4	4	S	7	4	S	7	4	T	10	4	T	12	4	S	15	4	T	17	4	F	20	4	M	23	4	W	25	4	S	28	3	S	1
5	T	5	5	S	8	5	S	8	5	W	11	5	F	13	5	M	16	5	W	18	5	S	21	5	T	24	5	T	26			Nov	4	M	2
6	F	6	6	M	9	6	M	9	6	T	12	6	S	14	6	T	17	6	T	19	6	S	22	6	W	25	6	F	27	5	S	1	5	T	3
7	S	7	7	T	10	7	T	10	7	F	13	7	S	15	7	W	18	7	F	20	7	M	23	7	T	26	7	S	28	6	M	2	6	W	4
8	S	8	8	W	11	8	W	11	8	S	14	8	M	16	8	T	19	8	S	21	8	T	24	8	W	27			Oct	7	T	3	7	T	5
9	M	9	9	T	12	9	T	12	9	S	15	9	T	17	9	F	20	9	S	22	9	W	25	9	T	28	8	S	1	8	W	4	8	F	6
10	T	10	10	F	13	10	F	13	10	M	16	10	W	18	10	S	21	10	M	23	10	T	26			Sep	9	M	2	9	T	5	9	S	7
11	W	11	11	S	11	14	S	14	11	T	17	11	T	19	11	S	22	12	W	25	12	S	28	11	M	2	11	W	4	11	S	7	11	M	.
13	F	13	13	M	16	13	M	16	13	T	19	13	S	21	13	T	24	13	T	26			Aug	12	T	3	13	F	6	12	S	8	12	T	10
14	S	14	14	T	17	14	T	17	14	F	20	14	S	22	14	W	25	14	F	27	13	S	1	13	W	4	13	F	6	13	M	9	13	W	11
16	M	16	16	T	19	16	T	19	16	S	22	16	T	24	16	F	27			July	15	T	3	15		6	15	S	8	15	W	11	15	F	12
17	T	17	17	F	20	17	F	20	17	M	23	17	W	25	17	S	28	18	S	1	16	W	4	16	S	7	16	M	9	16	T	12	16	S	14
18	W	18	18	S	21	18	S	21	18	T	24	18	T	26		L	Sol	17	M	2	17	T	5	17		8	17	T	10	17	F	13	17	S	15
19	T	19	19	S	22	19	S	22	19	W	25	19	F	27	18	S	1	18	T	3	18	F	6	18	M	9	18	W	11	18	S	14	18	M	16
20	F	20	20	M	23	20	M	23	20	T	26	20	S	28	19	M	2	19	W	4	19	S	7	19	T	10	19	T	12	19	S	15	19	T	17
21	S	21	21	T	24	21	T	24	21	F	27			June	20	T	3	20	T	5	20	S	8	20	W	11	20	F	13	20	M	16	20	W	16
22	S	22	22	W	25	22	W	25	22	S	28	21	S	1	21	W	4	21	F	6	21	M	9	21	T	12	21	S	14	21	T	17	21	T	19
23	M	23	23	T	26	24	T	26			May	22	M	2	22	T	5	22	S	7	22	T	10	22	F	13	22	S	15	22	W	18	22	F	20
24	T	24	24	F	27	22	F	27	23	S	1	23	T	3	23	F	6	23	S	8	23	W	11	23	S	14	23	M	16	23	T	19	23	S	21
25	W	25	25	S	28	25	S	28	24	M	2	24	W	4	24	S	7	24	M	9	24	T	12	24	S	15	24	T	17	24	F	20	24	S	22
26	T	26			Mar			Apr	25	T	3	25	T	5	25		8	25	T	10	25	F	13	25	M	16	25	W	18	25	S	21	25	X	X
27	F	27	26	S	1	26	S	1	26	W	4	26	F	6	26	M	9	26	W	11	26	S	16	26	T	17	26	T	19	26	S	22	26	M	23
28	S	28	27	M	2	27	M	2	27	T	5	27	S	7	27	w	10	27	T	12	27	S	15	27	W	18	27	F	20	27	M	25	27	T	24
		Feb	28	T	3	28	T	3	28	F	6	28	S	8	28	W	11	28	F	13	28	M	16	28	T	19	28	S	21	28	T	24	28	W	25
29	S	1				29	W	4	29	S	7	29	M	9	29	T	12	29	S	14	29	T	17	29	F	20	29	S	22	29	W	25	29	T	26
30	M	2	L			30	T	5	30	S	8	30	T	10	30	F	13	30	S	15	30	W	18	30	S	21	30	M	23	30	T	26	30	T	27
31	T	3				31	F	6				31	W	11				31	M	16	31	T	19				31	T	24				31	S	28

L For Leap Day transferred Mid-Summer

By placing the new month between June and July existing ideas of the course of the months would be maintained, and the days beyond twenty-eight each month would be easily adjusted per Table E from January 28 to the maximum difference of fifteen days on the proposed July 1st, and thence decrease to nothing in December.

That greatest difference occurring near mid summer, when the temperature is most permanent, would scarcely be felt, as weather variations are greater in other months.

The Conference would be the best authority to decide the name of the "New Month," which should be brief, and a root-word common to most nations. "Sol" is suggested in Table E, but "Mid," or a similar name might be better.

The groups of three columns between the heavier rulings down Table E indicate, 1st, the dates for the year 1916 (with Leap-day re-adjusted); 2nd, the days of the week; 3rd, the equivalent dates in the proposed almanac, to which the week-days names in 1916 would be permanently fixed for all future years. Hence, Table E could be used after 1916 to transpose any legal, birthday or other date from the present to the proposed style of almanac.

The removal of "Leap-Day" (which should be a public holiday) to precede the 1st of the "New Month" is desirable to give the workers that holiday near mid-summer, and link it up with the week-end the Whitsuntide holidays, so highly appreciated in Europe, as the best holidays the masses of toilers enjoy.

The "Whitsunday" printed between "Leap-Day" and the 1st Sunday of the "New Month" is merely the fixed Ecclesiastical name transferred to that Sunday which is proposed to be permanently celebrated a week later than its date in 1916, to begin the Mid-Summer Month for general convenience.—But if the Churches adhere to the 1916 date, as seven weeks after Easter, we shall not lose much.

Easter Sunday as the "key-date" of the Church Calendar is located on the proposed May 1st where it is due by the present style in 1916, and all the other dates under the "proposed style follow exactly the same successive order as in 1816, except (1) the adjustment of one day from February 29th to the end of June consequent upon the removal of "Leap-Day," and (2) through the last six days of the year following the insertion of the "Dies-non" as Christmas Day.

The Church Festivals affect the public convenience of the larger populations of Europe far more than is the case in America, therefore, due weight must be accorded to their needs. To that end the following

comparative list of Festivals and Holidays is recorded for comparison on Table E.

	Year 1916 Dates.	Suggested Dates.
St. David's Day	March 1	March 4
St. Patrick's Day	March 17	March 20
Lady Day	March 25	March 28
Good Friday	April 21	April 27
Easter Sunday	April 23	May 1
St. George's Day	April 23	May 1
Leap Day (Holiday)	Feb. 29	June 28
Whit-Sunday	June 11	*Sol. 1*
Dominion Day (Canada)	*July 1*	*Sol. 14*
Independence Day (U.S.A.)	*July 4*	*Sol. 16*
August Bank Holiday	Aug. 7	Aug. 2
Michaelmas Day	Sept. 29	Sept. 20
Martinmas Day	Nov. 23	Nov. 19
Thanksgiving Day (U.S.A.)	*Nov. 24*	*Nov. 20*
St. Andrew's Day	Nov. 30	Nov. 26
Christmas Day	Dec. 25	Dec. 22

After the International Conference decides upon the best *fixed* order of the 365 days of the year in weeks and months, each nation will continue free to fix its own Holidays, but for the convenience of their people it is hoped that they will tend to hold holidays adjoining Sunday, and preferably on the Monday, to increase the enjoyment of their workers, *e.g.* In Canada "Dominion Day" would fall on Saturday the 14th of the new month, and though much better there linked with Sunday than on Wednesday (as happens this year), would be more conveniently held on the Monday 16th to avoid disturbing the Saturday markets when most of the workers do their shopping. They would like the Saturday half-day to extend their holiday visits.

It is suggested to our American friends that they could gain more from their national holidays, if they were thus permanently combined with the week-ends for public convenience, by merely moving "Independence Day" one day forward, and "Thanksgiving Day" one day later, just as they now do temporarily when those holidays fall on Sunday.

If those suggestions were adopted these vigorous nations of North America whose interchange of commerce and interests are so rapidly increasing, might derive mutual advantage and greater convenience by both celebrating those national holidays on the 16th of the new month. That would be fair to both, as each would have adjusted its date by one working day for their united benefit.

Disadvantages of the Proposed Thirteen Months.

1. Yearly salary, rents, etc., divided by 12=.083 per dollar, whereas division by 13=.077, and though both are .003 from the simple eight cents per month, 13 is more difficult to divide. The printing of the simple Quotient Table (as on page 51 of the Rational Almanac) with future almanacs would make divisions by 13 easier than we now divide by 12. A $1200 salary now paid $100 per month, would in a 13 months' year be paid $92 per month, totalling $1196 + $4 balance payable in the new-month.

The natural result would be the adoption of simpler rates for the many times more frequently used months, based on the most easily divisible 24 working days, e.g. at $4 per day=$24 per week, or $96 per month.

2. The 1st, 2nd and 3rd quarters and 1st half year would not end with the month,—*but they would gain the better convenience of ending with the week, and so save split abstracting and adjustments, as periods of earnings and weekly expenses would coincide.*

3. The slight inconvenience during the initial year in which the 13 months may be introduced.—*That would easily be overcome by suitable provisions in the Act of Parliament by which the change would be brought into effect, and by the printed almanacs wherein 13 cycles of the permanent month would prove so highly useful that these minor disadvantages would scarcely be felt, as they would fall subservient to the merits of the smooth working and efficient month of four weeks that most completely solves our almanac difficulties.*

These disadvantages sink into insignificance when compared with the following advantages and the world-wide gain in facilitating international commerce and intercourse.

The few people who superstitiously regard the number 13 as unlucky are answered by the fact that we have already 13 weeks per quarter year, and that we could gain so many more useful facilities by 13 equal months.

Advantages of the Proposed Change.

The advantages in favour of a "Rational Almanac" are so numerous and obvious that beyond the removal of the many existing anomalies and inconveniences recorded on page 12, I need only allude to the International benefits which would result from this reform, by promoting harmony and good-will between the world's greatest populations in Asia and other nations. Upon the cultivation of mutual respect the peace and happiness of the bulk of humanity will assuredly depend during years to come, and never more than in the next few years.

However earnest a missionary may be, he cannot impress a cultured Chinaman that our ways are right when we record time as say 10.0 a.m.

on the 27th May, 1908, when the Chinese know that the year should be first and the month, etc., follow in nature's order as 1908, May 27—10.0.

We are industrially ahead of them, but they can by example teach us thrift, industry, courage, perseverance and other virtues including tolerance and open mindedness to see the good in both white and yellow races—as those who last year saw the sturdy Japanese rush into the icy stream near Field, B.C., to fix the timbers needed to support the C. P. R. bridge, admiringly admitted when the failure of white men to do that had necessitated sending some miles to get the plucky Japs to do it.

We abandoned crude earthenware and fading inks when we found how the Chinese made China cups, etc., and indelible inks, because they benefitted us. That all sufficient reason of personal benefit will lead the great peoples of Asia to quickly adopt the four week-month, as they use the seven days week, and when every third year their 13 moon-months approximate our 13 months of four weeks the practical advantages of the latter will speedily lead to general adoption.

Similarly the use of the "Dies-non Holiday" after the proposed almanac is used by European races will every few years unite the Mahommedan, Hindoo, Chinese, etc., sabbaths through all the 52 Sundays of a year, during which we can unite with those creeds in worship to the all wise Creator, instead of Mahommedans doing that on Fridays, Jews on Saturdays, etc. That almanac created unity will unconsciously develop the interests of peace and good-will amongst all races and creeds, just as you are doing with such immigrants in America who enjoy our Sunday's rest.

Ease with which the Change can be Made.

Some persons who have never fairly considered the subject imagine that before this beneficial change can be accomplished some great difficulties have to be overcome; but all who have been open-minded enough and given time to consider the facts have been convinced that the desired reform will be easily effected at an early date.

Uninformed people are apt to think that an alteration of the almanac involves difficulties like the introduction of the metric or decimal system of weights and measures, whereas there will be scarcely any difficulty as will presently be shown.

Others erroneously jump to the conclusion that there would be similar trouble to that you experienced in America during the change to decimal coinage; but glad as Americans were to make that change they may rest assured that though these proposals would, when carried into practice yield similarly increased facilities, there would not be one thousandth part of such practical difficulties occasioned by almanac reform.

We have not the grave difficulties in the path of reform that confronted Julius Cæsar who had to expand the year 45 B. C. by 80 days amongst the uneducated peoples of Europe. Neither have we to deal with the awkward case which Pope Gregory the Great had to decide in 1582 A. D. when ten days had to be deducted from that year, nor the 11 days which Protestant England foolishly deferred deducting until 1752, when few people could read or write, nor get the 13 days which Russia must from necessity leave out within the next few years.

The proposed almanac neither requires additions to, nor deductions from the regular 365 days year.—On the contrary every day therein would become fixed and regular.

That most vital consideration makes this reform infinitely easier to carry into effect, although the practical advantages that can be derived by the adoption of the "Rational Almanac" are believed by competent authorities to be very much greater in public convenience than those great and wise reforms, which after all simply adjusted the length of the civil year and anchored January 1st to begin on the same solar date.

The practical convenience Europeans derived from Constantine the Great's substitution of the quarter-moon by the seven days week in the year 321 A. D. has probably exceeded that of the combined reforms of Julius Cæsar and Pope Gregory XIIIth. It was the fixity they gave to the year's length and the settled order of dates therein, that gave those reforms pre-eminence.

In the reform now proposed, the object is to fix the date and name for every day permanently and remove all uncertainty by three successive governmental operations well within the powers of the representatives of all countries to accomplish for the good of all, as no selfish interests are involved.

1. The governments will be asked to assemble an international conference to decide the best method of reforming the months and locating the "Dies-non," also to determine the date upon which the new almanac shall begin.
2. Next each country will in accordance with these decisions pass their own Acts of Parliament to carry the solutions of the conference into effect and regulate their national holidays.
3. Finally the almanac makers and printers in their respective countries will under the powers of such Acts print and circulate the new almanacs as we do now, but with permanent week-day and other names attached to the 365 days individually. The Farmers' Almanacs will record the dates for sowing, etc. Law and University Calendars will have fixed term dates; whilst

markets, fairs, festivals, etc., would all be *fixed* in the public almanacs as now.

But those almanacs would be permanent as the changing of week-day names for dates would then cease. The fixed four weeks per month would permanently anchor each of our seven week-days to the 4 *fixed dates* opposite their respective names in the "Model Month" on page 3. Then the date would always indicate the day of the week *e.g.* 7, 14, 21 and 28 would denote Saturdays; 1, 8, 15 and 22 Sundays and so forth.

That eminently practical fixed month would speedily become so easily imprinted on our minds that we could by that one month's dates, instantly call to mind the week-day names for any dates in the year, and our watches would indicate the day of the week and date of the month as regularly as they now do the hour we look for on waking. The incessant efforts now necessary to remember the day of the week and month for all purposes would vanish.

The numerous references we now make direct to almanacs, or mentally grope for along the 12 antiquated Roman tablet months of irregular length and ceaseless change of week-day names, would then cease to burden our minds, which would then become free to cast aside that mental crutch poem of "30 Days hath Sept., April, June and Nov., etc." with its tedious exceptions.

Thoughtful persons who reflect upon the number of times per day we thus needlessly waste mental energy upon those efforts now forced upon us by our imperfect almanacs, consider the proposed change to be highly desirable, as it will benefit everybody without injuring anyone.

Statesmen and representatives of the nations called upon to consider the advisability of this reform will realize the developing need for a more convenient almanac suited to modern requirements and unfettered from the defects of the imperfect system of unequal months and changing day names that sufficed in the era of slavery and serfdom 2,000 years ago.—They know that the vast social and industrial changes developed during that long period are becoming more accentuated every year, and they will be quite as ready as the members of the Royal Society of Canada to appreciate not only the conveniences a "Rational Almanac" would give to themselves daily when reading, writing, making appointments, etc., but also give due weight to the fact that the existing almanac anomalies and inconveniences are similarly detrimental to nearly all the 2,000,000,000 people in the world.

Many of us make numerous almanac references every day in business transactions. It will surprise most people when they individually count the number they make.—But if we take the least possible number of one day, that shows that the colossal number of 730,000,000,000 need-

less references annually are wasted by our present defective almanacs and could be saved perpetually by this reform, which would work just as easily as February does now each year.

We have practical experience of that, and know how easily we work in even the 29th day for February in Leap years because we record in day-units and it is printed in our almanacs before that date arrives.—Easier still would the "Model Month" always glide along, conferring its perpetual benefits and conveniences upon us all because everybody gladly accepts the day of nature as the inexorable unit of our lives.

Just as surely as Constantine the Great had to lead his people to forsake their quarter-moon periods and accept the fixed seven days week for their common good,—so surely will the leaders of modern nations carry into effect the natural sequence of adopting the fixed four weeks per month now that the month has developed into such vastly greater use than the quarter years.

Your ex-president has reminded you of the effective diplomatic means by which "Standard Time" was so beneficially established amongst all nations, by adherence to the fixed hour unit of change.

But with all due deference it must be pointed out that the beneficial changes proposed by the "Rational Almanac" could be applied with even less trouble than that involved, and without a tithe of the trouble the British Daylight Adjustment Act will cause, as after the Almanac Amendment Act affecting each country is passed, and the printed almanacs circulated, we should only have to press the day-lever on our watches once as the "Dies-non" came round each year, to cause our daily almanac worries to then disappear.

Those nations who are wisely establishing governmental safeguards to Contributory Pension Funds as the best means towards ensuring adequate provision for their workers in old age by encouraging thrifty well-ordered lives by reward and thereby keeping down the cost of living to strengthen their nation's welfare, are finding it highly desirable to save clerical details and yet be just by requiring payments each four weeks as Belgium, etc., are doing.

Friendly, fraternal and other self-help societies, church and similar organizations everywhere would benefit by the change—as well as the dominant business people—in fact the 28 day month would help everybody.

Justice would be meted out to monthly prisoners who would serve 28 days instead of varying 28 to 31. They would come out in a better frame of mind and with clearer ideas as to what "a month" usually was, whilst the nations would permanently save 8 per cent of the cost of maintaining them.

Soldiers, sailors, clerks, domestic servants and the host of people who receive and pay monthly would all be justly dealt with and much tiresome trouble saved.

In almanac reform the supreme need is for a "standard month" to measure with the week. Just as we have fixed and even lengths of seconds, minutes and hours sub-dividing the day, so we need the standard day week and month to measure the year and perfect our system of time.

The longer the unit the more important it is to all concerned. That being so, leads us to wonder why a standard month has not yet been established? Various causes retarded that, but the chief factor was that the rigidly unequal months were fixed by the military rule of the Cæsars, who stereotyped the almanac for Europe long before the seven days week was introduced. Later, exclusive privileges and secret powers to derive easily earned incomes and profits from almanac construction, became vested in certain influential families and dignitaries in the various countries, who jealously conserved and mystified their profession until the year 1828. Then the British monopoly to sell almanacs was taken from the two family representatives who had inherited that privilege from Queen Elizabeth reign, and other people were allowed to print them.

Intercourse between nationalities was rare and united action to establish such a standard was impracticable because every nation was bitterly jealous of its neighbours through almost incessant warfare. The professional almanac makers who had to advise national rulers were financially interested in preventing the introduction of any such simple system as the four-week month.

That would so easily have enabled their customers to make plain wood permanent almanacs for themselves, by using a monthly board with 28 holes bored therein for record by a movable peg, that the costly engraved "Clog Almanacs," in use before printing was invented, and expensive printed almanacs they later had to sell, would not have been required. The bewildering moon wandering of Church Festivals and lingering use of the moon for locating the drifting tides, together with its changing phases and awe-inspiring features prevented men from daring to think that a "standard month" could be used. Nearly all those drawbacks have ceased to operate and changed conditions now prevail. The sub-division of the year is now entirely a matter for governments to decide for public convenience.

We of the 20th century should free ourselves from the irritating fetters of shifting day-name-links in the illogical chain of rugged months which Augustus welded upon his slaves. Shall we not after two thousand years of advance in civilization exercise the true spirit of liberty to decide upon whatever course may prove to be best for our generation?

We need the four-week-month because the 7 days week has become the working and paying unit used by the masses of our vastly increased population. The people under Augustus were mostly fed by rations and seldom bought or sold — indeed, they were largely sold like cattle and slaved ten days per week. They had not the freedom to enjoy the seven days which Constantine the Great conferred on Europeans about four centuries later.

Almanac needs in this busy age of world-wide trade, have grown beyond the scope of the narrow limits and antiquated methods that sufficed for the selfish fancy of Augustus,— now that all countries are opened up for the immense international trade now done, and are penetrated by the ever increasing railways, steamships, and other methods of communication.

That trade involves duplicate entries and troublesome diversity wherever different almanacs are used. The prevailing confusion impressed me whilst wintering near Jerusalem during December, 1900, and January, 1901, when five different Christmases and four New Years were there celebrated by various races and creeds.

Whilst we cannot forthwith remedy all that confusing effect, we can easily take the common-sense course of adopting a "Standard Month" at an early date for our own convenience; then the Eastern races will be quick enough to follow in order to gain the facilities that change will bring.

After twelve years of continuous consideration and investigation in various countries, I submit for your consideration, that the present erratic months fixed by the caprice of Augustus Cæsar are becoming so irksome under the developing needs of our civilization now requiring greater convenience, that the simple month of four weeks (giving equal division into thirteen months and thirteen weeks to the quarters of every year) will prove most advantageous, and that it will ultimately become universal for the reasons given — the chief of them being that it would be easiest when fixed and permanently supplying the greater convenience we should derive from having all the months uniformly containing four weeks, so that Sundays would be the 1st, 8th, 15th and 22nd; Mondays, 2nd, 9th, 16th and 23rd, etc.; whilst the essential weekly wages, etc., would then always accord with the corresponding monthly payments. Then every almanac purpose would be completely served for national and international use by all nations, who might then begin the Universal Era and relieve their peoples from almanac anomalies and inconveniences.

Forethought is necessary as the most useful and widest used "*Nautical* Almanac," based on Greenwich Time, is now internationally adopted for navigation throughout the world, and is worked out and

printed about four years in advance. The year 1916 is suggested as the most convenient date to make the change, because it could then most easily,— almost imperceptibly — be effected.

That is within the measurable distance of time which inquiries from the best authorities indicate as a practicable limit within which this earnestly desired reform can be accomplished by the united efforts of friends of progress. It is therefore submitted for your thoughtful consideration, in order that we may be able to participate in the benefits that thus can be won for humanity during our lives.

Although the success of this movement does not depend upon public debate, it is of practical interest to everyone and will prove a fruitful and profitable subject for discussion.

The main question you are asked to consider is, how far it may be made practicable during the next few years, by wise concerted action, to remove existing difficulties now developing from almanac anomalies? not only in Christian countries, but throughout the world, wherein humanity could so largely be benefitted by a simple universal almanac all could most easily adopt for mutual advantages, like "Standard Time," the benefits of which we are daily realizing.

One way by which you can materially help the movement is by the discussion of almanac reform in your Journal, and advocacy of such reform as you collectively consider is the best.

The greatest works of the pyramid building nations of Egypt, Assyria, Mexico, etc., were erected to supply almanac needs. Let us complete their stupendous labours and solve the problem now.

The time is ripe for united action, now whilst peace and good will permeates the nations and the spirit of reform prevails.

Prompt and decisive action is advisable to favourably impress statesmen and the leaders of nations now that the subject has grown beyond the scope of individuals.

Neither the Bill before the British Parliament for Reform in the year 1912, nor the one before the German Parliament, nor the changes proposed by Russia, Greece, Japan, etc., can be wisely made until an International Conference carefully decides what is best for the mutual good-will and development of all nations.

As to whether that conference should be held at the Temple of Peace in Holland, or amidst the cosmopolitan populations now uniting in America, or elsewhere, national diplomacy through our ambassadors will decide. There may be competition between the governments as to which will first invite that assemblage to maturely consider the various plans for reform then proposed, and adopt whatever the combined wisdom of those national representatives finds to be best, from any nation.

Where is that likelier to be developed than in the inventive minds of enlightened Americans, who have attracted the most energetic youthful people from all nations and creeds to this continent, where monthly payments are most frequent and where cosmopolitan people most need the four-week-month and "Rational Almanac" for perpetual use.

The suggestion that 2 months of 4 weeks followed by the Quarterly month of 5 weeks might meet the case for reform, falls far short of the practical advantages provided by the 13 months of 4 weeks, and could not prove acceptable to the great American nations who pay almost entirely by the month.

Probably no other subject for reform can be so easily accomplished to yield such daily widespread benefits to all nations, because all humanity would thereby personally gain increased convenience and be permanently relieved from almanac uncertainties and inconveniences.

As Mr. Philip very truly writes, "The complications and inconven-
"iences which thus arise are incessant, and nothing but custom and an
"apparently universal ignorance of the extremely simple way in which
"these inconveniences can be obviated could possibly account for the
"apparent contentment with which they have been so long accepted."

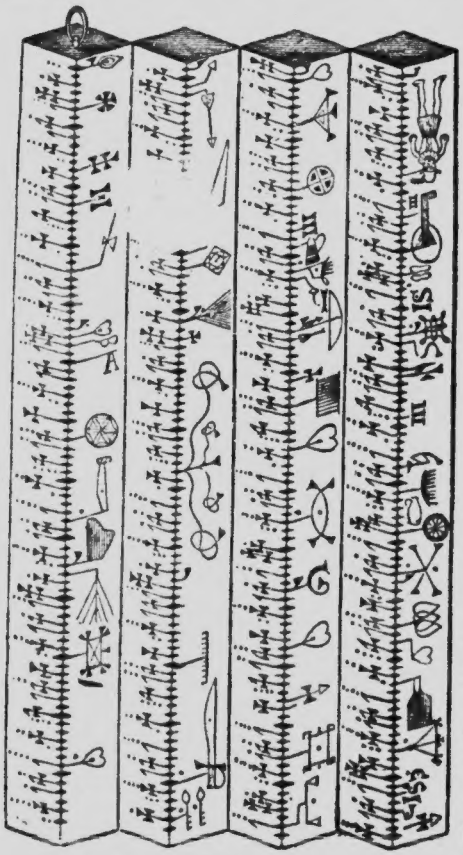
It would be very difficult to suggest a more desirable subject for international negotiation, or one more worthily tending to strengthen the bonds of peace and international good-will. Possibly the name "Inter-national Almanac" might better facilitate its general adoption.

M. B. COTSWORTH.

Box 211, Victoria, B.C.

ALMANAC MAKERS OF SARAWAK (BORNEO)
Ascertaining the Dates of Sowing Times in the Year 1905 by the ancient method of measuring the Sun's Shadow cast from Gnomons.

This typically illustrates the early methods by which our ancestors developed their systems of Daily and Yearly Time through thousands of years, until their stupendous labours culminated in building the Pyramids, by which the precise length of the year was first discovered, through that extended application of the primitive method here shown. The Official Almanack Maker carries round his Meridian Rod to measure the shadow lengths for each Season, then marked by pegs driven in along the Meridian floor-line. Natives know to sow Rice when the Shadow-tip reaches the Rice peg. Maize when the shadow reaches the Maize peg, and so forth.



This was a four-sided log, about 18 inches long and 1½ inches square. The four edges detailed the Quarters of the Year, each day being marked by a cut or "notch," Sundays being deeper, Festival Dates denoted by Saintly Emblems, and Agricultural Work by Signs

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The Rational Almanac.

Without disturbing the accepted Gregorian lengths of Years now used, the advantages of the Proposed Permanent Almanac could be easily realised by the following 3 simple steps:—

1—From Christmas Day, 1916, cease naming Christmas Day by any week-day name, and merely call it "Christmas Day," which could be thus set apart as the extra yearly day, fitted into the last week of the year as a duplicate Sunday to permanently combine the week-end holiday with Christmas, and get rid of the troublesome and unbusinesslike changing of week-day names for dates in future years.

By naming "Leap Day" as a Public Holiday without any week-day name, justice would be done to salaried servants, whilst maintaining fixed day names for each date.

2—Let Easter, Whitsuntide and the other movable Festivals be FIXED (as Christmas is) to always fall on the fixed Dates to be arranged for 1916, or such other Permanent Dates as will best suit the convenience, welfare and pleasure of the People—Easter our longest "open-air" public holiday, would be better for the Church and people if celebrated in the more ideal weather towards May.

3—Divide the 52 weeks of the Year *into 13 months of 4 weeks each* for greater utility and business facility, by inserting a Mid-Summer month (Sol) as shown to the right below.

PRESENT (1899) STYLE. *Varying every year to 1916.*

No. of Days in Qrs. and Half Years.	*Month*	*Sun.*	*Mon.*	*Tue.*	*Wed.*	*Thu.*	*Fri.*	*Sat.*
Days	JAN.	1	2	3	4	5	6	7
		8	9	10	11	12	13	14
		15	16	17	18	19	20	21
		22	23	24	25	26	27	28
		29	30	31	...	...	...	...
	FEB.	...	...	...	1	2	3	4
		5	6	7	8	9	10	11
90		12	13	14	15	16	17	18
		19	20	21	22	23	24	25
		26	27	28	...	...	...	...
	MAR.	...	...	...	1	2	3	4
		5	6	7	8	9	10	11
		12	13	14	15	16	17	18
		19	20	21	22	23	24	25
		26	27	28	29	30	31	...
	APR.	...	...	...	...	...	...	1
		2	3	4	5	6	7	8
		9	10	11	12	13	14	15
		16	17	18	19	20	21	22
		23	24	25	26	27	28	29
		30	...	...	...	...	...	...
	MAY.	...	1	2	3	4	5	6
91		7	8	9	10	11	12	13
		14	15	16	17	18	19	20
		21	22	23	24	25	26	27
		28	29	30	31	...	...	...
	JUNE.	...	...	...	...	1	2	3
		4	5	6	7	8	9	10
		11	12	13	14	15	16	17
		18	19	20	21	22	23	24
181		25	26	27	28	29	30	...
	JULY.	...	...	...	...	...	...	1
		2	3	4	5	6	7	8
		9	10	11	12	13	14	15
		16	17	18	19	20	21	22
		23	24	25	26	27	28	29
		30	31	...	...	...	...	...
	AUG.	...	...	1	2	3	4	5
		6	7	8	9	10	11	12
92		13	14	15	16	17	18	19
		20	21	22	23	24	25	26
		27	28	29	30	31	...	...
	SEPT.	...	...	...	...	...	1	2
		3	4	5	6	7	8	9
		10	11	12	13	14	15	16
		17	18	19	20	21	22	23
		24	25	26	27	28	29	30
	OCT.	1	2	3	4	5	6	7
		8	9	10	11	12	13	14
		15	16	17	18	19	20	21
		22	23	24	25	26	27	28
		29	30	31	...	...	...	...
	NOV.	...	...	...	1	2	3	4
92		5	6	7	8	9	10	11
		12	13	14	15	16	17	18
		19	20	21	22	23	24	25
		26	27	28	29	30	...	...
	DEC.	...	...	...	...	...	1	2
		3	4	5	6	7	8	9
		10	11	12	13	14	15	16
		17	18	19	20	21	22	23
184		24	25	...	...	...	...	...
		...	26	27	28	29	30	31
365								

PROPOSED FUTURE STYLE *Fixed from Christmas, 1916.*

WeekNo	Sun.	Mon.	Tues.	Wed.	Thu.	Fri.	Sat.	Month and its No.	Days in proposed ½ Year.
1	1	2	3	4	5	6	7	1 JAN.	
2	8	9	10	11	12	13	14		
3	15	16	17	18	19	20	21		
4	22	23	24	25	26	27	28		
5	1	2	3	4	5	6	7	2 FEB.	
6	8	9	10	11	12	13	14		
7	15	16	17	18	19	20	21		91
8	22	23	24	25	26	27	28		
9	1	2	3	4	5	6	7	3 MAR.	
10	8	9	10	11	12	13	14		
11	15	16	17	18	19	20	21		
12	22	23	24	25	26	27	28		
13	1	2	3	4	5	6	7	4 APR.	
14	8	9	10	11	12	13	14		
15	15	16	17	18	19	20	21		
16	22	23	24	25	26	27	28		
17	1	2	3	4	5	6	7	5 MAY.	
18	8	9	10	11	12	13	14		
19	15	16	17	18	19	20	21		91
20	22	23	24	25	26	27	28		
21	1	2	3	4	5	6	7	6 JUN.	
22	8	9	10	11	12	13	14		
23	15	16	17	18	19	20	21		
24	22	23	24	25	26	27	28		
25	1	2	3	4	5	6	7	7 SOL.	182
26	8	9	10	11	12	13	14		
27	15	16	17	18	19	20	21		
28	22	23	24	25	26	27	28		
29	1	2	3	4	5	6	7	8 JUL.	
30	8	9	10	11	12	13	14		
31	15	16	17	18	19	20	21		
32	22	23	24	25	26	27	28		
33	1	2	3	4	5	6	7	9 AUG.	91
34	8	9	10	11	12	13	14		
35	15	16	17	18	19	20	21		
36	22	23	24	25	26	27	28		
37	1	2	3	4	5	6	7	10 SEP.	
38	8	9	10	11	12	13	14		
39	15	16	17	18	19	20	21		
40	22	23	24	25	26	27	28		
41	1	2	3	4	5	6	7	11 OCT.	
42	8	9	10	11	12	13	14		
43	15	16	17	18	19	20	21		
44	22	23	24	25	26	27	28		
45	1	2	3	4	5	6	7	12 NOV.	92
46	8	9	10	11	12	13	14		
47	15	16	17	18	19	20	21		
48	22	23	24	25	26	27	28		
49	1	2	3	4	5	6	7	13 DEC.	
50	8	9	10	11	12	13	14		
51	15	16	17	18	19	20	21		
	22	✕	..	..	.	..	..		183
52	..	23	24	25	26	27	28		

365 Days in the Ordinary Civil Year. **365**

The Two Styles Contrasted.

PRESENT STYLE. *Varying needlessly every year.*	PROPOSED FUTURE STYLE. *Fixed from Christmas, 1916.*
DISADVANTAGES.	**ADVANTAGES.**
Complicated and Changing.	*Simple, Fixed and Permanent*
Calendar constructed on a shifting basis for Ecclesiastical purposes.	Fixed uniformly for the future. The Calendar should be constructed on the **natural unit of the week**, as the best for public convenience
Days of the week on different dates during succeeding years.	Days uniformly fixed throughout future years.
Weeks not comparative year by year.	Weeks always the same each year, truly comparative and equitably measured to cover the year, as weekly diaries exactly fitting all the months.
Impracticable now to get the much-needed MONTHLY balances of income and expenditure for large businesses etc.	**Monthly business balances of income and expenditure made easy, thus conferring this most useful boon for business and public use.**
Months irregular, thereby involving broken weeks, which cause injustice in monthly payments and in face of weekly wages, etc., making monthly balances almost impracticable.	Months all alike, uniform in the length and days of their weeks. Equalities in monthly receipts payments, etc., secured. Monthly bills, drafts, etc., always fall clear of Sundays. Pay-days, etc., always on the same dates. Monthly accounts proportioned to expenses. Monthly appointments always on the same days of the week, whilst weekly and bi-weekly fixtures would recur on fixed dates throughout every month.
Business, Parliament, Law Courts, University, College, School, etc., Terms disturbed and unequal.	**All Terms fair and equal.**
Quarters, half-years, etc., uneven for interest, rents, etc., involving odd days of weeks, etc., to adjust, thus giving needless trouble and risk of error.	Quarters, half-year, etc., equalized—all ending in complete weeks, thus avoiding the troublesome adjustments and useless work. **Comparative returns and statements for all corresponding periods would be fair and true.**
Disturbance of quarter days, etc., when falling on Sunday.	All would fall on Saturday, their most convenient day, completing the week and quarter.
Unreliable comparisons of revenue expenditure, railway, and all business, etc., earnings owing to variations of Easter and the unequal lengths of months.	An absolutely equal and reliable basis of comparison assured without the trouble of adjustments week by week. The months would all be equal.
Periods of earning disagree with periods of payment, producing inequalities in earning-time.	Periods of earning and payment alike. Natural equalities of "earning-time" secured.
Wastes time, money and energy. Creates worry. Causes undue suffering to the poor. Tends to make mistakes in dates.	Saves time, money, energy and good temper. Avoids poor people needless suffering. Avoids mistakes in dates.
Easter, Whitsuntide, and other Festival holidays, etc., vary with the moon.	Festivals, holidays, etc., fixed upon uniform dates in future years. **Christmas and other Holidays in their happiest positions.**
Public holidays liable to fall on very inconvenient days and dates.	Public holidays sure to come upon the most convenient days and dates, to secure the week-end extension so highly prized.
Anniversaries, etc., on varying days.	Anniversaries, birthdays, etc., on the same day each year.
Leap Year Day badly fixed, and an injustice to salaried persons.	"Leap Day" suggested as a public holiday on a more suitable date. Provides fair play to salaried persons and servants.
The odd day of the year beyond 52 weeks causes confusion, etc.	Odd day of the year naturally absorbed in Christmas week
Impedes just Pension Schemes.	Aids Sound Old Age Pensions.
Unequal and unsuited to present day needs.	Admirably suited to present requirements.
Irksome and anomalous. **No adequate reason exists for this erratic jumble of Months, Festivals, Dates, etc.**	Plain, yet systematic, tending to ease and brighten our daily life, and help forward the higher interests of mankind.
ADVANTAGE	**DISADVANTAGE**
Is now in force and satisfied the needs of our forefathers (who however through their simpler lives did not need the constant Almanac references now necessary in our hurried life, for everyday requirements).	Not yet in force, consequently the change would (if sanctioned) entail some slight inconvenience during its initiation.

It is submitted that the superior advantages of the proposed simple style altogether outweigh the insignificant advantages of the old confused style.